



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/717,912

11/21/2003

Leo M. Rozmaryn

111190.121US1

7375

24395

7590

09/30/2004

WILMER CUTLER PICKERING HALE AND DORR LLP
THE WILLARD OFFICE BUILDING
1455 PENNSYLVANIA AVE, NW
WASHINGTON, DC 20004

EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,912

Applicant(s)

ROZMARYN, LEO M.

Examiner

Jewel V Thompson

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 12-26 is/are rejected.
- 7) ☒ Claim(s) 7 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/21/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 9, 10, 15-18 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemmon (4,774,966).

Regarding claims 1, 15, 21 and 24, Lemmen teaches a system for measuring muscle strength of a human thumb, comprising: a first structure (20) contacting at least a portion of a back side of the hand; a second structure (16, 18) contacting at least a portion of a palm of the hand (col. 2, lines 50 and 51), the first and second structures configured to secure the hand in a substantially fixed position (fig. 4); a ring (50) for receiving a thumb (fig. 3); a load cell (56) comprising electronics to record a force generated by the thumb (col. 3, lines 42-44); and a mechanical assembly (52) linking the ring and the load cell to transmit the forces from the ring to the load cell (col. 3, lines 42-44).

Regarding claim 5, Lemmen teaches the second structure is in a substantially fixed position (fig. 4).

Regarding claims 9 and 16, Lemmen teaches a connection whereby data recorded by the system can be transmitted to a computing device (col. 3, lines 40-52).

Regarding claim 10, Lemmen teaches means (20) for contacting at least a portion of a back side of the hand; means (col. 2, lines 50 and 51; (16 & 18)) for contacting at least a portion of a palm of the hand, the means for contacting the back side and the means for contacting the palm configured to secure the hand in a substantially fixed position (col. 2, lines 50 & 51); means (50) for receiving a thumb; means (col. 3, lines 42-51) for recording a force generated by the thumb; and means (52) for linking the ring and the load cell to transmit the force from the ring to the load cell.

Regarding claim 17, Lemmen teaches the thumb can move in at least a first direction and a substantially opposing second direction (col. 4, lines 65-68-col. 5, lines 1 and 2)

Regarding claim 18, Lemmon teaches the step of adjusting the position of at least a portion of the structure with respect to the hand (abstract).

Regarding claim 20, Lemmen teaches the force is recorded by a first system, and further comprising the step of transmitting the recorded force to a second system (col. 3, lines 42-52).

Regarding claims 22 and 25, Lemmen teaches a quantitative measure of forces generated in pure palmar thumb adduction and abduction to serve as an adjunct to grip and pinch strength in the following conditions: osteo-arthritis pre-operation and post-operation; rheumatoid arthritis pre-operation and post-operation; thumb reconstruction

Art Unit: 2855

after trauma; reconstruction of congenital differences; following tendon transfer surgery; and/or following tumor resection and reconstruction (col. 1, lines 24-35).

Regarding claims 23 and 26, Lemmen teaches the system significantly, substantially and/or completely isolates one or more muscles that are enervated by the motor branch of the median nerve or terminal motor branches of the ulnar nerve (col. 2, lines 45-65).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 - 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemmen in view of Koch (3,897,058).

Regarding claim 2, Lemmen teaches the ring in configured to transmit the force generated by the thumb (fig. 3), However Lemmen fails to teach that the force is transmitted by the thumb to the threaded shaft and the nut; mechanical assembly comprises a threaded shaft and a nut. Koch teaches an athletic testing device comprising a threaded shaft (44) and a nut (74). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the threaded shaft and nut assembly of Koch in place of the force transmission member,

Art Unit: 2855

rod, line or chain of Lemmen for the purpose of providing a tight fit within the pressure grip.

Regarding claim 3, Lemmon teaches a beam (28) positioned substantially perpendicular to the threaded shaft (28), the beam transmitting the load from the threaded shaft to the load cell (fig. 2).

Regarding claim 4, Lemmon fails to teach a knob for rotating the threaded shaft to adjust the position of the nut on the threaded shaft. Koch teaches a knob (94). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the knob of Koch in the device of Lemmen for the purpose of manually securing the shaft in the nuts.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemmen in view of Fry-Welch et al (5,163,443).

Regarding claim 6, Lemmen fails to teach the first structure is movable to secure the hand in the substantially fixed position. Fry-Welch et al teaches a system for testing hand, wrist, and forearm strength comprising a structure (51), which is movable to secure the hand in the substantially fixed position. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the support of Fry-Welch et al in the device of Lemmen for the purpose of securing the hand while at the same time being able to adjust the support for one's comfort while being tested.

Art Unit: 2855

4. Claims 8, 12-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemmen in view of Manning (5,723,785)

Regarding claims 8 and 19, Lemmen fails to teach the electronics provides the capability to at least one of: a) display and record forces in at least one of metric and 15 English units; b) display and record a peak force; c) continuously display and record forces generated by the thumb; and d) reset the system prior to a next exertion of force by the thumb. Manning teaches a hand muscle tension measuring apparatus comprising a display screen electronically coupled to the tension transducer. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the display screen of Manning in the device of Lemmen for the purpose of visually seeing the amount of tension from each individual finger.

Regarding claim 12, Lemmen teaches a structure (50) for receiving a thumb of the hand while the hand is in the substantially fixed position; a force measuring device (56) to record a force generated by the thumb in at least one of abduction and adduction directions; and a mechanical assembly (52) transmitting the force generated by the thumb to the force measuring device. Lemmen fails to teach a clamping apparatus to secure a hand in a substantially fixed position. Manning teaches a clamping apparatus (54) to secure a hand in a substantially fixed position. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the hand-clamping device of Manning in the device of Lemmen for the purpose of supporting the determining the tension of the fingers.

Regarding claim 13, Lemmen teaches the force-measuring device continuously records forces generated by the thumb over a finite period of time (col. 3, lines 32-52).

Regarding claim 14, Lemmen teaches the structure is adjustable with respect to the hand when the hand is in the substantially fixed position (col. 3, lines 61-68).

Allowable Subject Matter

5. Claims 7 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Art Unit: 2855

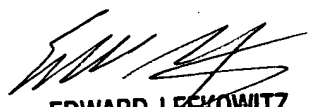
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jvt
September 26, 2004


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800